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VERTEBRATES OF THE IDAHO NATIONAL ENGINEERING LABORATORY

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ABSTRACT

Abundance, habitat use, and seasonal occurrence are reported for the 5 fish, 1 amphibian, 9 reptile, 159 bird and 37 mammal species recorded on the Idata National Engineering Laboratory National Environmental Research Park in southeastern Idaho. An additional 45 species, for which site records are lacking, were listed as possibly occurring because portions of their documented range and habitat overlap the INEL. Species of special concern on the federal and state level are discussed.

VERTEBRATES OF THE IDAHO NATIONAL ENGINEERING LABORATORY

INTRODUCTION

The Idaho National Engineering Laboratory (INEL) was established as an energy research and development testing site in the late 1940's. Since 1949, the INEL has been withdrawn from public domain and is closed to public access, thereby providing relatively undisturbed wild ife habitat. The INEL was designated a National Environmental Research Park (NERP) in 1975. Because of its NERP designation, all land within the INEL is protected as an outdoor laboratory where the effects of energy development on the environment and the complex ecological relationships of this cool desert ecosystem can be studied. The INEL NERP serves as a research area for scientists from a number of universities, as well as state and federal agencies.

Comprehensive base-line data, including species accounts, mull be available to adequately assess the impact of environmental perturbation on flora and fauna. In this regard, the flora of the INEL has been extensively surveyed by Atwood (1970), Harniss and West (1973), McBride et al. (1978), Jeppson and Holte (1978), Anderson and Holte (1981), and Cholewa and Henderson (in press). Several invertebrate taxa have also been examined by Allred (1968a,b, 1969, 1970, 1971, 1973a), Allred and Muma (1971), and Allred and Cole (1971). Although the occurrence of fish (Overton 1977), small mammals (Allred 1973b), amphibians and reptiles (Sehman and Linder 1978), and raptors (Craig 1979) has been described, a comprehensive list of vertebrates on the INEL has not been published. The purpose of this report is to combine previously unpublished information with published data to present a comprehensive list of the vertebrates occurring on the INEL. Abundance, habitat use, and seasonal occurrence are described for each species.

This report should not be considered a definitive list of the vertebrate species occurring on the INEL. Although all of the abundant and common species should be included, some of the less commonly occurring

species were probably missed. Not all habitats on the INEL have been surveyed with the same intensity. Therefore, the number of vertebrate species observed on the INEL is likely to increase as field efforts in some of the lesser studied habitats intensify.

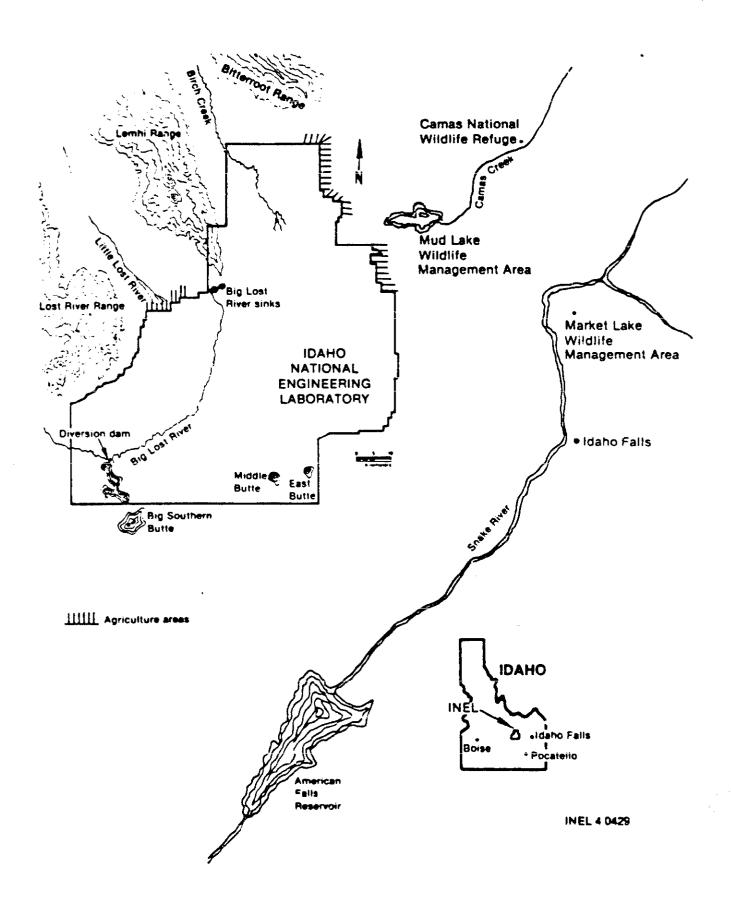
SITE DESCRIPTION

The 2,300 km² ha INEL is located on the upper Snake River Plain in southeastern Idaho (Figure 1). Currently, the primary research missions of the INEL are reactor fuel reprocessing, breeder reactor research, fuel and structural material testing, reactor safety testing, radioactive waste management, and prototype nuclear naval propulsion engine research and training.

The INEL is located in portions of Butte, Bonneville, Bingham, Jefferson, and Clark counties. The topography is flat to gently rolling with frequent lava outcrops typical of the Columbia Plateau Province (Atwood 1970). The INEL is bordered on the north and west by the Lemhi, Lost River, and Bitterroot Mountain ranges. The average elevation of the INEL is 1526 m ASL. East, Middle, and Big Southern buttes occur on and near the southern portion of the INEL, and have elevations of 1952 m ASL, 2014 m ASL, and 2309 m ASL, respectively.

Surface water occurs in limited amounts on the INEL. The Big Lost River enters the southwest corner of the site, flows north, and percolates into the Snake River aquifer at the sinks near Howe, Idaho. Within the INEL, the Big Lost River seldom flows year-round because of upstream agricultural irrigation. During peak flows of the Big Lost River, water is diverted to a spreading area approximately B km east of where the river enters the site. In the past, the Little Lost River and Birch Creek entered the INEL along the west and northern borders, respectively; however, both rivers are now diverted for agricultural irrigation before reaching the site and only occasionally flow onto the INEL. Small (0.2-0.5 hz) man-made ponds offer aquatic habitats for many species and occur at several INEL facility complexes.

Figure 1. Map of the Idaho National Engineering Laboratory and surrounding area.



Soils of the INEL are derived from silicic volcanic and Paleozoic rocks from nearby mountains and buttes and are underlain by basalt (McBride et al. 1978). Soils are gravelly to rocky and generally shallow in the southern portion of the INEL. The northern portion of the site is covered by lake and aeolian deposits, mostly composed of unconsolidated clay, silt, and sand (Atwood 1970).

McBride et al. (1978) described 20 distinct vegetative cover types on the INEL. Big sagebrush (Artemista tridentata) and rabbitbrush (Chrysothamnus spp.) dominate the INEL vegetation; other locally important shrubs are winterfat (Ceratoides lanata), shadscale saltbush (Atriplex confertifolia), Nuttall saltbush (A. nutallii), and gray horsebrush (Tetradymia canescens) (Anderson and Holte 1981, Harniss and West 1973). Bottlebrush squirreltail (<u>Sitanion hystrix</u>), needle and thread grass (<u>Stipa</u> comata), Indian ricegrass (Oryzopsis hymenoides), Great Basin wildrye (Elymus cinereus), thickspike wheatgrass (Agropyron dasystachyum), and bluebunch wheatgrass (Agropyron spicatum) are the more abundant grass species (Harniss and West 1973). Tree species are limited to junipers (Juniperus spp.) near the southeast and northwest corners of the INEL and plains cottonwood (Populus deltoides) along the Big Lost River. Russian olive (Elaeagnus angustifolia) and several introduced species of evergreen and deciduous trees have been planted near most of the INEL facilities. Approximately 4000 ha of the INEL were seeded with crested wheatgrass (Agropyron cristatum and A. desertorum) in the late 1950's. Holte (1978) listed a total of 389 vascular plant species on the site. Approximately 70% of the site is grazed by sheep or cattle.

Mountain ranges near the INEL influence weather patterns in this area. The climate is characterized by hot summers and cold winters with low total precipitation. Annual precipitation averages 22 cm, occurring mostly as snow in December and January and (ain in May and June. Snowfall ranges from 30 cm to 114 cm per year $(\bar{x} = 72 \text{ cm})$. Extremes of temperature range from -44°C to 39°C. The INEL lies in a belt of prevailing westerly winds that are locally channeled by the terrain into a prevailing southwest to northeast direction. Monthly averages of relative humidity at the site

range from a minimum of 15% in September to a maximum of 89% in February (Yanskey et al. 1966).

METHODS

This report is based on past and present ecological studies conducted on the INEL and incidental observations made in conjunction with this research. All native vertebrate species occurring on the INEL are described in terms of seasonal abundance and habitat. Robbins et al. (1966), Burt and Grossenheider (1964), Peterson (1961), and Stebbins (1954; 1966) were used as field classification guides. Taxonomic nomenclature for fish, amphibians and reptiles, birds, and mammals was based on Simpson and Wallace (1978), Nussbaum et al. (1983), American Ornithologists Union (1983), and Hall (1981), respectively.

Definitions of terms used for seasonal use categories are:

Resident - occurs on the INEL throughout the year Migrant - occurs on the INEL only during migration Summer - occurs on the INEL during summer Winter - occurs on the INEL during winter.

Abundance ratings were used to indicate a species' relative numbers during its seasonal use of the INEL. Abundance ratings for species lists are often skewed in favor of conspicuous species. To minimize this bias, we quantified abundance ratings for birds and mammals by asking 10 investigators with field experience on the INEL to rate each species from 1 to 10, where I represented a very rare sighting and 10 indicated an abundant species. A mean value for each species indicated that species' relative abundance. However, some species had a wide range of ratings (i.e., 1-9), suggesting that these species might be locally common. Therefore, an abundance class (local) was added to more accurately describe these species. Abundance of amphibians and reptiles was obtained from Sehman and Linder (1978). Overton 1977) provided data on fish abundance. Abundance ratings were based on the assumption that trained personnel would

exert a reasonable effort to search or sample the proper habitat at the correct time of year.

Definitions of terms used for abundance on the INEL are:

Abundant - very numerous and certain to be seen or sampled; a mean rating of 8.1-10.0

Common - likely to be observed or sampled; a mean rating of 5.1-8.0

Uncommon - occurs in limited numbers and is not likely to be observed or sampled; a mean rating of 2.1-5.0

Local - A species that is not always present or is restricted in distribution; a mean rating was not calculated, but if the difference between the high and low score was >8, the species was considered local.

Rare - A species that has the INEL as part of its range but occurs very infrequentl; a mean rating of 0.1-2.0

Accidental - A species that is not expected to be found in the INEL area (e.g. black-legged kittiwake [Rissa tridactyla], northern saw-whet owl [Aegolius acadicus]).

Vertebrates were classified according to the following habitats: aquatic (on or near water), juniper foothills, riparian zones, sagebrush/grassland, sitewide, irrigated lawns near facilities, and agricultural areas. The sitewide designation indicated that a particular species is ubiquitous. Terms for habitat types, seasonal use, and abundance ratings were modified from Trost et al. (1977) and Stephens and Reynolds (1983).

Species that may occur on the INEL were also listed. Species were listed as possibly occurring if their sightings were unverified, or if

their geographic range overlaps the INEL and their preferred habitats occur within the site.

RESULTS AND DISCUSSION

Five fish, 1 amphibian, 9 reptile, 159 bird, and 37 mammal species have been documented to occur on the INEL in southeastern Idaho (Tables 1, 2, 3, and 4). An additional 9 fish, 5 amphibian, 5 reptile, 13 bird, and 14 mammal species were listed as possibly occurring, because portions of their range overlap the INEL area, or they have been reported within 30 km of the site. However, no verified observations of these species have been reported on the INEL.

Fifty-six species of vertebrates are year-long residents of the INEL, whereas 154 species were observed during specific seasonal periods or during migration.

The bald eagle (<u>Haliaeetus leucocephalus</u>) and the American peregrine falcon (<u>Falco peregrinus</u>) were the only species observed on the INEL that are classified as endangered or threatened wildlife (U.S. Fish and Wildlife Service 1982). Several bald eagles (endangered status) were observed during winters. No bald eagles are known to vinter on the INEL, but this species often winters in the Little Lost River Valley just north of the site. The American peregrine falcon (endangered status) has been observed infrequently on the northern portion of the INEL.

Several species of wildlife observed on the INEL are of special concern to the Idaho Department of Fish and Game (1977). This status is designated for species whose populations are threatened due to habitat loss, range restrictions, or low population numbers. Species of special concern that occur on the INEL are the bobcat (<u>Lynx rufus</u>), peregrine falcon, ferruginous hawk (<u>Buteo regalis</u>), and prairie falcon (<u>Falco mexicanus</u>).

A list of species of special concern also has been prepared by the U.S. Bureau of Land Management (R. S. McCarty, pers. comm.). The osprey (<u>Pandion haliaetus</u>), gyrfalcon (<u>Falco rusticolus</u>), merlin (<u>Falco columbarius</u>), white-faced ibis (<u>Plegadis chihi</u>), long-billed curlew (<u>Numenius americanus</u>), and burrowing owl (<u>Athene cunicularia</u>) are not on the Federal or Idaho lists but are included in the BLM report and all occur on the INEL.

The INEL is used by 34 species of game animals. However, 22 of these species are waterfowl, and the value of the site to waterfowl depends on water flow in the Big Lost River. During periods of high water flow, the site may contain over 800 ha of wetlands. The Big Lost River spreading areas and Big Lost River sinks, located in the southern and west central portion of the site, respectively, are major wetlands on the INEL. These areas often contain water during spring and fall and provide habitat for migratory waterfowl, shorebirds, and other wildlife species. Further, all INEL facility ponds are used by migratory waterfowl and shorebirds, as well as resident species. Wildlife use of the ponds at the Test Reactor Area has been well documented (Halford and Millard 1978).

The most common resident game animals on the site are the pronghorn (Antilocapra americana), mourning dove (Zenaida macroura), and sage grouse (Centrocercus urophasianus). Forty percent of the Idaho pronghorn population, as well as some pronghorn from Montana, may winter on the INEL (Reynolds and Rose 1978). Further, 67 active sage grouse leks have been identified on the INEL (Connelly and Ball 1983). Thus, the site provides critical winter range for pronghorn and winter and breeding habitat for sage grouse.

The INEL also provides important breeding and nesting habitat for many species of raptors (Craig 1979) and songbirds (Peterson and Best 1983). A number of papers have been published on avian and mammalian ecology on the INEL; a list of these publications is provided in Markham (1983). Future ecological research will undoubtedly provide further information on the importance of the INEL to other vertebrate species.

LITERATURE CITED

- Allred, D. M. 1968a. Icks of the Mational Reactor Testing Station. Brigham Young Univ. Sci. Bull. Biol. Series 10(1). 29 p. . 1968b. Fleas of the National Reactor Testing Station. Great Basin Natur. 28:73-87. _____. 1969. Spiders of the National Reactor Testing Station. Great Basin Natur. 29:105-108. ____. 1970. Mites and lice of the National Reactor Testing Station. Brigham Young Univ. Sci. Bull. Biol. Series 11(1). 17 p. . 1971. Mammalian ectoparasite consortism at the National Reactor Testing Station. Great Basin Natur. 31:77-82. ____. 1973a. Scorpions of the National Reactor Testing Station, Idaho. Great Basin Natur. 33:251-254. _____. 1973b. Small mammals of the National Reactor Testing Station, Idaho. Great Basin Natur. 33:246-250. ____ and A. C. Cole, Jr. 1971. Ants of the National Reactor Testing Station. Great Basin Natur. 31:237-242. ____ and M. H. Muma. 1971. Solpugids of the National Reactor Testing Station, Idaho. Great Basin Natur. 31:164-168. American Ornithologists Union. 1983. Check-list of North American
- Anderson, J. E. and K. E. Holte. 1981. Vegetation development over 25 years without grazing on sagebrush-dominated rangeland in southeastern Idaho. J. Range Manage. 34:25-29.

birds. Allen Press, Lawrence, Kansas, 877 pp.

- Atwood, N. O. 1970. Flora of the National Reactor Testing Station. Brigham Young Univ. Sci. Bull. Biol. Series 11(4). 46 p.
- Burt, W. H. and R. P. Grossenheider. 1964. A field guide to the mammals. Houghton Mifflin Co., Boston. 284 p.
- Cholewa, A. F. and D. M. Henderson. In press. A survey and assessment of the rare vascular plants of the Idaho National Engineering Laboratory. Great Basin Natur.
- Connelly, J. W. and I. J. Ball. 1983. Sage grouse census methods and populations in southeastern Idaho. p. 325-337 in O. D. Markham (ed.), Idaho National Engineering Laboratory radioecology and ecology programs, 1983 progress report. DOE/ID-12098, Nat. Tech. Inf. Serv., Springfield, VA.
- Connelly, J. W. and R. J. Gates. 1981. First record of a black-legged kittiwake in Idaho. Condor 83:272-273.
- Craig, T. H. 1979. The rapions of the Idaho National Engineering Laboratory Site. U.S. Department of Energy (Idaho Operations Office) Tech. Rep. IDO-12089. 27 p.
- Green, J. S. and J. T. Flinders. 1980. <u>Brachylagus idahoensis</u>. <u>Mammalian</u> species No. 125. <u>American Society of Mammalogists</u>. <u>Lawrence</u>, Kansas. 4 p.:
- Halford, D. K. and J. B. Millard. 1978. Vertebrate fauna of a radioactive leaching pond complex in southeastern Idaho. Great Basin Natur. 38:64-70.
- Hall, E. P. 1981. The mammals of North America. 2nd ed., Vol. 1 and 2. John Wiley and Sons, New York. 1181 p.
- Harniss, R. O. and K. E. West. 1973. Vegetation patterns on the National Reactor Testing Station, southeastern Idaho. Northwest Sci. 47:30-43.

- Idaho Department of Fish and Game. 1977. A plan for the future management of Idaho's fish and wildlife resources. Volume I, Goals, objectives, and policies. Idaho Department of Fish and Game, Boise, Idaho. 215 p.
- Jeppson, R. J. and K. E. Holte. 1978. Flora of the Idaho National Engineering Laboratory Site. pp: 129-143 in O. D. Markham (ed.) Ecological Studies on the Idaho National Engineering Laboratory Site 1978 Progress Report. IDO-12087 Natl. Tech. Inf. Serv., Springfield, VA.
- Jones, J. K. Jr., D. C. Carter, and H. H. Genoways. 1979. Revised checklist of North American mammals north of Mexico, 1979. Occas. Papers, The Huseum, Texas Tech. Univ. No. 62. 17 p.
- Markham, O. D. (ed.). 1983. Idaho National Engineering Laboratory radioecology and ecology programs, 1983 progress report.

 DOE/ID-12098. Nat. Tech. Inf. Serv., Springfield, Virginia. 434 p.
- McBride, R., N. R. French, A. H. Dahl, and J. E. Detmer. 1978. Vegetation types and surface soils of the Idaho National Engineering Laboratory Site. IDO-12084. Natl. Tech. Inf. Serv., Springfield, VA. 28 p.
- Nussbaum, R. A., E. D. Brodie, Jr., and R. M. Storm. 1983. Amphibians and reptiles of the Pacific Northwest. University Press of Idaho, Moscow. 330 pp.
- Overton, C. K. 1977. Description, distribution, and density of Big Lost River salmonid populations. MS thesis, Idaho State University, Pocatello. 50 p.
- Peterson, K. L. and L. B. Best. 1983. Effects of prescribed burning on nongame birds breeding in sagebrush communities Pre-burn phase. p. 202-210 in O. D. Markham (ed.), Idaho National Engineering Laboratory radioecology and ecology programs, 1983 progress report. DOE/ID-12098. Nat. Tech. Inf. Serv., Springfield, VA.

- Peterson, R. T. 1961. A field guide to western birds. Houghton Mifflin Co., Boston. 309 p.
- Reynolds, T. D. and F. L. Rose. 1978. Pronghorn antelope use of the INEL National Environmental Research Park. p. 219-223 in O. D. Markham (ed.), Ecological studies on the Idaho National Engineering Laboratory Site, 1978 progress report. IDO-12087. Nat. Tech. Inf. Serv., Springfield, VA.
- Robbins, C. S., B. Bruun, H. S. Zim, and A. Singer. 1966. A guide to field identification birds of North America. Hestern Publ. Co., Racine, Wisconsin. 340 p.
- Sehman, R. W. and A. D. Linder. 1978. Amphibian and reptilian fauna on the Idaho National Engineering Laboratory Site. IDO-12086. Nat. Tech. Information Services, Springfield, VA. 26 p.
- Simpson, J. C. and R. L. Wallace. 1978. Fishes of Idaho. University Press of Idaho, Moscow. 237 p.
- Stebbins, R. C. 1954. Amphibians and reptiles of western North America.

 McGraw-Hill Book Co., Inc. New York. 536 p.
- _____. 1966. A field guide to western reptiles and amphibians. Houghton Mifflin Company. Boston. 279 p.
- Stephens, D. A. and T. D. Reynolds. 1983. Birds of southwestern Idaho. Great Basin Natur. 43:728-738.
- Trost, C. H., S. L. Findholt, and T. D. Rich. 1977. Birds of Idaho field checklist. Department of Biology, Idaho State University. Pocatello, Idaho. 2 p.
- U.S. Fish and Wildlife Service. 1982. List of endangered and threatened wildlife and plants. The Bureau of National Affairs, Inc. (50 CFR 17.11) Washington, D.C. 20037.

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Yanskey, G. R., E. M. Markee Jr., and H. P. Richter. 1966. Climategraphy of the National Reactor Testing Station. IDO-12048. Idaho Operations Office, U.S. AEC. 175 p.

Spec ies	Distribution	Seasonal Occurrence	Abundance	Remarks
Order CLUPE IFORMES				
F≡ily Salmonidae				
Kokanee Salmon (Oncorhynchus nerka)	Big Lost River	Migrant	Uncommon	Restricted by water flow
Rainbow Trout (Salmo gairdneri)	Big Lost River	Resident	Common	Restricted by water flow
Prook Trout (Salvelinus fontinalis)	Big Lost River	Resident	Uncommon	Restricted by water flow
Mountain Whitefish (<u>Prosopium williamsoni</u>)	Big Lost River	Resident	Common	Restricted by water flow
Order PERCIFORMES				
Family Cottidae				
Snorthead Sculpin (Cottus confusus)	Big Lost River	Resident	Comnon	Restricted by water flow
POSSIBLE OCCURRENCE				
Order CLUPEIFORMES	·			
Family Salmonidae				
Dolly Varden (<u>Salvelinus malma</u>)	Big Lost River			Restricted by water flow
Cutthroat Trout (<u>Salmo clarki</u>)	Big Lost River			Restricted by water flow
Order CYPRINIFORMES				
Family Cyprinidae				
Speckled Dace (Rhinichthys osculus)	Big Lost River			Restricted by water flow
Longnose Dace (Rhinichthys cataractae)	Big Lost River			Restricted by water flow
Utah Chub (Gila atraria)	Big Lost River		ş	Restricten by water flow

TABLE 1. (continued)

Spec 1es	Distribution	Seasonai Occurrence	Abundance	Remarks
Redside Shiner (<u>Richardsonius balteatus</u>)	Big Lost River			Restricted by water flow
Family Catostomidae				
Bridgelip Sucker (Catostomus columbianus)	big Lost River			Restricted by water flow
Utah Sucker (<u>Catostomus ardens</u>)	Big Lost River			Restricted by water flow
Order PERCIFORMES				
Family Cottidae				
Piute Sculpin (<u>Cottus baldingi</u>)	Big Lost River			Restricted by water flow

Speci es	Distribution	Seasonall Occurrence	Abundance	Remarks
Grder ANURA				
Family Pelobatidae				
Great Basin Spadefoot Toad (Spea intermontana)	Aquatic	Resident	Соптол	Restricted by water availability
Order SQUAMATA				
Family Iquanidae				
Leopard Lizard (<u>Gambella wislizenii</u>)	Sagebrush/ grassland	Resident	Uncommon	
Short-horned Lizard (<u>Phyrnosoma</u> <u>douglassi</u>)	Sagebrush/ grassland	Resident	Comnon	
Sagebrush Lizard (<u>Sceloporus graciosus</u>)	Sagebrush/ grassland	Resident	Common	
Family Scincidae				
Western Skink (<u>Eumeces skiltonianus</u>)	Sitewide	Resident	Rare	
Family Boidae				
Rubber Boa (<u>Charira bottae</u>)	Sitewide	Resident	Rare	
Family Colubridae				
Desert Striped Whipsnake (Mastiocophis taeniatus)	Sitewide	Resident	Uncommon	
Gopher Snake (<u>Pituophis melanoleucus</u>)	Sitewide	Resident	Common	
Western Terrestrial Garter Snake (<u>Thamnophis</u> elegans)	Sitewide	Resident	Uncommon	
Family Viperidae				
Western Rattlesnake (<u>Crotalus viridis</u>)	Sitewide	Resident	Common	

TABLE 2. (continued)

	Diabathualua	Seasonal	Ahuadaass	Remarks
Species	Distribution	Occurrence	Abundance	Remark \$
POSSIBLE OCCURRENCE ²	•			
Order CAUDATA				
Family Ambystomidae				
Tiger Salamander (Ambystoma tigrinum)	Aquatic			
Order ANURA				
Family Hylidae				
Striped Chorus Frog (<u>Pseudacris triseriata</u>)	Aquat ic			
Family Ranidae				
Northern Leapard Frog (Rana pipiens)	Aquatic			Sehman and Linder (1978) suggested this species may occur
Spotted Frog (<u>Rana pretiosa</u>)	Aquat ic			
Family Bufontdae				
Western Toad (<u>Bufo boreas</u>)	Agricultural Aquatic Riparian			
Order SQUAMATA				
Family Iguanidae				
Mojave Black-collared Lizard (Crotaphytus bicinctores)	Sitewide			Sehman and Linder (1978) suggested this species may occur
Family Colubridae				
Racer (<u>Coluber constrictor</u>)	Sitewide			
Ringneck Snake (<u>Diadophis punctatus</u>)	Sitewide			

TABLE 2. (continued)

Species	Distribution	Seasonal Occurrence	Abundance	Romark ş
Night Snake (<u>Hypsiglena torquata</u>)	Sitewide			
Common Garter Snake (Thamnophis sirtalis)	Sitewide			

¹ Yearlong residents, even though they are only observed in spring, summer and early fall.

² Ranges overlap the IMEL (Mussbaum et al. 1983, Stebbins 1966); however, there are no documented observations.

Species

Orier GAVIIFORMES

Family Gaviidae

Common Loon (Gavia immer)

(Casmerodius albus)

Green-backed Heron

(Butorides striatus)

Distribution

Aquatic

Seasonal

Occurrence

Migrant

Summer

Migrant

Summer

Rare

Accidental

Accidental

Abundance

Rare

Remarks

	Order PODICIPEDIFORMES			
•	Family Podicipedidae			
	Pied-billed Grebe (<u>Podilymbus podiceps</u>)	Aquatic	Summer Migrant	Rare Rare
	Horned Grebe (<u>Podiceps auritus</u>)	Aquat 1c	Migrant	Rare
	Eared Grebe (Podiceps nigricallis)	Aquatic	Migrant Summer Winter	Uncommon Rare Uncommon
	Western Grebe (<u>Aechmophorus occidentalis</u>)	Aquatic	Migrant Summer	Rare Rare
	Order PELECANIFORMES			
	Family Pelecanidae			
	American White Pelican (Pelecanus erythrorhynchos)	Aquatic	Migrant	Rare
	Order CICONIIFORMES			
	Family Ardeidae			
	American Bittern (<u>Botaurus</u> <u>lentiginosus</u>)	Aquatic	Migrant Summer	Rare Rare
	Great Blue Heron (<u>Ardea herodias</u>)	Aquatic	Migrant Summer	Rare Rare
	Great Egret	Aquatic	Migrant	Rade

Aquatic

Species	Distribution	Seasonal Occurrence	Abundance	Remarks
Family Threskiornithidae				
White-faced Ibis (Plegadis chihi)	Aquatic	Migrant Summer	Rare Nare	Special concern (U.S. Bureau of Land Management)
Order ANSERIFORMES				
Family Anatidae				
Subfamily Anserinae				
Tundra Swan (Cygnus columbianus)	Aquatic	Migrant	Rare	
Snow Goose (Chen caerulescens)	Aquatic	Migrant	Rare	
Canada Goose (Branta canadensis)	Aquatic	Migrant Summer	Uncommon Uncommon	
Subfamily Anatinae				
Wood Duck (Aix sponsa)	Aquat 1c	Migrant Summer	Rare Accidental	
Green-winged Teal (Anas crecca)	Aquatic	Migrant Summer	Uncommon Uncommon	
Mallard (Anas platyrhynchos)	Aquat ic	Migrant Summer Winter	Common Common Uncommon	
Korthern Pintail (Anas acuta)	Aquatic	Migrant Summer	Uncommon Uncommon	•
Blue-winged Teal (Anas discors)	Aquatic	Migrant Summer	Uncommon Common	Females are indistinguishable from female cinnamon teal; males of both species are similar in fall plumage
Cinnamon Teal (Anas cyanoptera)	Aquatic	Migrant Summer	Uncommon Uncommon	
Northern Shoveler (Ana: clypeata)	Aquatic	Migrant Summer	Uncommon Uncommon	•
Gadwall (Anas strepera)	Aquatic	Migrant Summer	Uncommon Uncommon	

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_		Seasonal	44	
Species	Cistribution	Occurrence	Abundance	Remarks
American Wigeon (Anas americana)	Aquat ic	Migrant Summer	Uncommon Uncommon	
Canvasback (Aythya valisineria)	Aquat ic	Migrant Summer	Rare Rare	
Rednead (<u>Aythya americana</u>)	Aquatic	Migrant Summer Winter	Rare Rare Rare	
Ring-necked Duck (Aythya collaris)	Aquatic	Migrant Summer	Rare Rare	
Lesser Scaup (<u>Aythya affinis</u>)	Aquatic	Migrant Summer Winter	Uncommon Rare Uncommon	
Common Goldeneye (<u>Bucephala clangula</u>)	Aquatic	Migrant Summer Winter	Uncommon Rare Uncommon	
Barrow's Goldeneye (Bucephala islandica)	Aquat ic	Migrant Summer	Rare Accidental	
Bufflehead (Bucephala albeola)	Aquat Ic	Migrant Summer	Uncommon Rare	
Common Merganser (<u>Mergus merganser</u>)	Aquatic	Migrant Summer	Rare Uncommon	
Ruddy Duck (<u>Oxyura jamalcensis</u>)	Aquatic	Migrant Summer	Uncommon Rare	
Order FALCONIFORMES				
Family Cathartidae				
Turkey Vulture (<u>Cathartes aura</u>)	Sitewide	Migrant Summer Winter	Uncommon Uncommon Accidental	
Family Accipitridae				
Subfamily Pandionidae				
Osprey (<u>Pandion haliaetus</u>)	Aquat ic	Migrant	Rare	Special concern (U.S. Bureau of Land Management)

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Species	Distribution	Seasonal Occurrence	Abundance	Remarks
Subfamily Accipitrinae				
Bald Eagle (Haliaeetus leucocephalus)	Sitewide	Migrant Winter	Rare Uncommon	Endangered (Federal list)
Northern Harrier (Circus cyaneus)	Sitewide	Resident	Common	
Sharp-shinned Hawk (Accipiter striatus)	Sitewide	Migrant Summer	Rare Rare Rare	
Cooper's Hawk (<u>Accipiter cooperii</u>)	Sitewide	Migrant Summer Winter	Rare Uncommon Rare	
Northern Goshawk (<u>Accipiter</u> <u>gentilis</u>)	Sitewide	Migrant Summer Winter	Rare Rare Rare	
Swainson's Hawk (<u>Buteo swainsoni</u>)	Sitewide	Migrant Summer Winter	Uncommon Uncommon Rare	
Red-tailed Hawk (Buteo jamaicensis)	Sitewide	Migrant Summer Winter	Uncommon Uncommon Rare	
Ferruginous Hawk (<u>Buteo regalis</u>)	Sitewide	Migrant Summer Winter	Uncommon Uncommon Rare	Special concern (Idaho Department of Fish and Game 1977)
Rough-legged Hawk (<u>Buteo</u> <u>lagopus</u>)	Sitewide	Migrant Winter Summer	Common Common Accidental	
Golden Eagle (Aguila chrysaetos)	Sitewide	Migrant Summer Winter	Local Uncommon Common	
Family Falconidae				
American Kestrel (<u>falco sparverius</u>)	Sitewide	Migrant Summer Winter	Common Common Uncommon	

Spec i es	Distribution	Seasonal Occurrence	Abundance	Remarks
Merlin (<u>falco columbarius</u>)	Sitewide	Resident	Rare	Special concern (U.S. Bureau of Land Management)
. Peregrine Falcon (<u>Falco peregr:nus</u>)	Sitewide	Resident	Rare	Endangered (Federal List)
Gyrfalcon (<u>falco rusticulus</u>)	Sitewide	Migrant	Accidental	Special concern (Idaho Department of Fish and Game)
Prairie Falcon (Falco mexicanus)	Sitewide	Resident	Uncommon	Special concern (U.S. Bureau of Land Management)
Order GALLIFORMES				
Family Phasianidae				
Subfamily Phasianinae				
Gray Partridge (<u>Perdix perdix</u>)	Agricultural Facilities	Resident	Uncommon	Occasionally observed in sagebrush/ grassland
Chukar (<u>Alectoris chukar</u>)	Juniper Sagebrush/ Grassland	Resident	Uncommon	
Ring-necked Pheasant (<u>Phasianus colchicus</u>)	Agricultural	Resident	Uncommon	
Subfamily Tetraoninae				
Blue Grouse (<u>Dendragapus poscurus</u>)	Agricultural Facilities	Summer	Accidental	Only 1 record; bird was observed with a flock of sage grouse at Central Facilities Area
Sage Grouse (Centrocercus urophasianus)	Sitewide	Resident	Common	
Order GRUIFORMES				
Family Rallidae				
Subfamily Rallinae				
Sora Rail (<u>Porzana carolina</u>)	Aquatic	Migrant	Rare	

TABLE 3. (continued)

Species	Distribution	Seasonal Occurrence	Abundance	Remarks
American Coot (<u>Fulica americana</u>)	Aquatic	Migrant Summer Winter	Uncommon Uncommon Uncommon	
rder ChARADRIIFORMES				
Family Charadridae		•		
Subfamily Charadriinae				
Killdeer (<u>Charadrius</u> <u>vociferus</u>)	Sitewide	Migrant Summer	Common Common	
Family Recurvirostridae				
American Avocet (Recurvirostra americana)	Aquatic	Migrant Summer	Uncommon Common	
Femily Scolopacidae				
Subfamily Scolopacinae				
Greater Yellowlegs (<u>Tringa melanoleuca</u>)	Aquat 1c	Migrant	Rare	
Lesser Yellowlegs (<u>Tringa flavipes</u>)	Aquat ic	Migrant Summer	Rare Rare	
Solitary Sandpiper (<u>Tringa solitaria</u>)	Aquat Ic	Migrant Summer	Uncommon Rare	
Willet (<u>Catoptrophorus semipalmatus</u>)	Aquatic Sagebrush/ Grassland	Migrant Summer	Uncommon Uncommon	
Spotted Sandpiper (<u>Actitis macularia</u>)	Aquatic	Migrant Summer	Uncommon Uncommon	
Long-billed Curlew (Numenius americanus)	Aquatic Sagebrush/ Grassland	Migrant Summer	Uncommon Uncommon	Special concern (U.S. Bureau of Land Management)
Marbled Godwit (<u>Limosa fedoa</u>)	Aquat 1c	Migrant Summer	Rare Uncommon	

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Species	Distribution	Seasonal Occurrence	Abundance	Remark s
Common Snipe (<u>Gallinago gallinago</u>)	Aquatic	Migrant Summer	Rare Rare	
Subfamily Phalaropodinae				
Wilson's Phalacope (Phalacopus tricolor)	Aquatic	Migrant Summer	Uncommon Uncommon	
Red-necked Phalarope (<u>Phalaropus lobatus</u>)	Aquatic	Migrant	Rare	
Family Laridae				
Subfamily Larinae				
Franklin's Gull (<u>Larus pipixcan</u>)	Sagebrush/ Grassland Aquatic	Migrant Summer	Uncommon Uncommon	
Bonaparte's Gull (<u>Larus philadelphia</u>)	Aquat 1c	Migrant	Rare	
Ring-billed Gull (<u>Larus delawarensis</u>)	Sitewide	Migrant Summer	Uncommon Uncommon	
California Gull (<u>Larus californicus</u>)	Sagebrush/ Grassland Aquatic	Migrant Summer	Uncommon Rare	
Herring Gull (Larus argentatus)	Sitewide	Migrant Summer	Uncommon Uncommon	
Black-legged Kittiwake (Rissa tridactyla)	Aquatic	Winter	Accidental	First state record (Connelly and Gates 1981)
Subfamily Sterninae				
Caspian Tern (<u>Sterna caspia</u>)	Aquatic	Migrant	Rare	
Forster's Tern (Sterna forster!)	Aquatic	Summer	Rare	
Black Tern (Chlidonius niger)	Aquatic	Migrant Summer	Rare Rare	

TABLE 3. (continued)

				
Species	Distribution	Seasonal Occurrence	Abundance	Remarks
Order COLUMBIFORMES				
Family Columbidae				
Rock Dove (<u>Columba livia</u>)	Agricultural Facilities	Resident	Common	
Mourning Dove (<u>Zenaida macroura</u>)	Sitewide	Migrant Summer Winter	Common Abundant Rare	
Order STRIGIFORMES				
Family Strigidae				
Great Horned Owl (<u>Bubo virginianus</u>)	Sitewid e	Resident	Uncommon	
Burrowing Owl (Athene cunicularia)	Agricultural Sagebrush/ Grassland	Migrant Summer Winter	Uncommon Uncommon Accidental	Special concern (U.S. Bureau of Land Management)
Long-eared Owl (<u>Asio otus</u>)	Riparian	Migrant Summer	Local Local	
Short-eared Owl (Asio flammeus)	Sitewide	Migrant Summer	Uncommon Uncommon	
Northern Saw-whet Owl (<u>Aegolius</u> <u>acadicus</u>)	Sitewide	Migrant Summer Winter	Accidental Accidental Accidental	•
Order CAPRIMULGIFORMES				
Family Caprimulgidae				
Common Nighthawk (Chordelles minor)	Sitewide	Migrant Summer	Uncommon Common	
Order APODIFORMES				
Family Apodidae				
Subfamily Apodinae				
White-throated Swift (Aeronautes saxatalis)	Riparian	Summer	Rare	

Spec tes .	Distribution	Seasonal Occurrence	Abundance	Remarks
Family Trochilidae				
Rufous Hummingbird (<u>Selasphorus rufus</u>)	Agricultural Riparian	Migrant Summer	Uncommon Uncommon	
Order CORACIIFORMES				
Family Alcedinidae				
Subfamily Cerylinae				
Belted Kingfisher (<u>Megaceryle alcyon</u>)	Aquatic	Migrant Summer	Uncommon Uncommon	
Order PICIFORMES				
Family Picidae				
Subfamily Picinae				
Downy Woodpecker (<u>Picoides pubescens</u>)	Ripartan	Migrant Summer	Rare Rare	
Northern Flicker (<u>Colaptes auratus</u>)	Riparian	Migrant Summer	Uncommon Uncommon	
Order PASSERIFORMES				
Family Tyrannidae				
Subfamily Fluvicolinae				
Olive-side Flycatcher (Contopus borealis)	Agricultural Riparian	Migrant Summer	Rare Rare	
Western Flycatcher (Empidonax difficilus)	Riparian	Summer	Rare	
Say's Phoebe (<u>Sayornis saya</u>)	Agricultural Facilities Riparian Juniper	Migrant Summer	Uncommon Uncommon	
Subfamily Tyranninae				
Ash-throated Flycatcher (Mylarchus cinerascens)	Riparian	Summer	Rare	

Species	Distribution	Occurrence	Abundance	Remark s
Western Kingbird (Tyrannus verticalis)	Agricultural facilities Riparian Juniper	Migrant Summer	Uncommon Uncommon	
Eastern Kingbird (Tyrannus tyrannus)	Agricultural Facilities Riparian Juniper	Migrant Summer	Uncommon Uncommon	
Family Alaudidae				
Hurned Lark (<u>Eremophila</u> <u>alpestris</u>)	Sitewide	Migrant Summer Winter	Common Abundant Common	
Family Hirundinidae				
Subfamily Hirundininae				
Tree Swallow (<u>Tachycineta bicolor</u>)	Agricultural Riparian Juniper	Migrant Summer	Uncommon Uncommon	
Violet-green Swallow (Tachycineta thalassina)	Agricultural Riparian Juniper	Migrant Summer	Local Local	
Northern Rough-winged Swallow (Stelgidoptc yx serripennis)	Agricultural Riparian Juniper	Migrant Summer	Uncommon Uncommon	
Bank Swallow (<u>Riparia riparia</u>)	Agricultural Riparian Juniper	Migrant Summer	Uncommo: Rare	
Cliff Swallow (Hirundo pyrrhonota)	Agricultural Riparian Juniper	Migrant Summer	Common Common	
Barn Swallow (Hirundo rustica)	Agricultural Riparian Juniper	Migrant Summer	Uncommon Common	
Family Corvidae				
Clark's Nutcracker (Nucifraga columbiana)	Juniper	Migrant Summer Winter	Local Local Rare	

Seasonal

V.

Species	Distribution	Seasonal Occurrence	Abundance	Remark s
Black-hilled Magpie (<u>Pica pica</u>)	Sitewide	Resident	Common	
American Crow (Corvus brachyrhynchos)	Sitewide	Resident	Uncommon	
Common Raven (<u>Corvus corax</u>)	Sitewide	Resident	Uncommon	
Family Troglodytidae				-
Rock Wren (<u>Salpinctes obsoletus</u>)	Sagebrush/ Grassland	Migrant Summer	Uncommon Uncommon	Usually near rock outcrops; canyons
Canyon Wren (<u>Catherpes mexicanus</u>)	Sagebrush/ Grassland	Migrant Summer	Rare Rare	Usually near rock outcrops; canyons
House Wren (Troglodytes aedon)	Agricultural Riparian	Migrant Summer Winter	Uncommon Uncommon Uncommon	
Family Muscicapidae				
Subfamily Sylviinae				
Ruby-crowned Kinglet (<u>Regulus calendula</u>)	Riparian	Migrant Winter	Uncommon Accidental	
Subfamily Turdinae				
Western Bluebird (<u>Stalia mexicana</u>)	Sagebrush/ Grassland Agricultural	Migrant Summer	Uncommon Uncommon	
Mountain Bluebird (Sialia currucoides)	Sagebrush/ Grassland	Migrant Summer	Uncommon Uncommon	
Townsend's Solitaire (Myadestes townsendi)	Riparian	Migrant Summer	Rare Rare	·
American Robin (Turdus migratorius)	Sitewide	Migrant Summer	Common Common	
Family Mimidae				
Northern Mockingbird (Mimus polyglottos)	Juniper	Summer	Accidental	

Spec t es	Distribution	Seasonal Occurrence	Abundance	Remarks
Sage Thrasher (Oreoscoptes montanus)	Sagebrush/ Grassland	Migrant Summer	Common Common	
Family Motacillidae				
Water Pipit (Anthus spinoletta)	Agricultural Sagebrush/ Grassland	Migrant	Rare	
Family Bombycillidae				
Bohemian Waxwing (Bombycilla garrulus)	Agricultural Facilities Riparian	Migrant Summer Winter	Common Uncommon Uncommon	
Cedar Waxwing (Bobmycilla cedrorum)	Agricultural Facilities Riparian	Migrant Summer Winter	Uncommon Rare Rare	
Family Laniidae				
Subfamily Laniinae				
Northern Shrike (<u>Lanius</u> <u>excubitor</u>)	Sitewide	Migrant Winter	Uncommon Rare	
Loggerhead Shrike (<u>Lanius ludovicianus</u>)	Sitewide	Resident	Uncommon	
Family Sturnidae				
European Starling (Sturnus vulgaris)	Sitewide	Resident	Common	
Family Vireonidae				
Subfamily Vireoninae				
Warbling Vires (Vireo gilvus)	Riparian	Migrant Summer	Rare Rare	
Family Emberizidae				
Subfamily Parulinae				
Yellow Warbler (<u>Dendroica</u> petechia)	Riparian	Migrant	Uncommon	

Spec 1es	Distribution	Seasonal Occurrence	Abundance	Remarks
Yellow-rumped Warbler (Dendroica coronata)	Riparian	Migrant Summer	Unconmon Uncommon	
Townsend's Warbler (Dendroica townsendi)	Riparian	"igrant	Rare	
Common Yellowthroat (Geothlypis trichas)	Riparian	Summer	Rare	
'ilson's Warbler (<u>w'lsonia pusilla</u>)	Riparian	Migrant Summer	Rare Rare	
Yellu -breasted Chat (Iteri virens)	'liparian	Summer	Rare	
Subfamily The supinae				
Western Tanager (<u>Piranga ludoviciana</u>)	ngricultural Riparian	Migrant Summer	Uncommon Uncommon	
Subfamily Cardinalinae				
Black-headed Grosbeak (Pheucticus melanocephalus)	Sitewide	Migrant Summer	Rare Rare	
Lazuli Bunting (<u>Passerina</u> <u>amoena</u>)	Riparian	Migrant Summer	Rare Rure	
Subfamily Emberizinae				
Green-tailed Towhee (<u>Pipilo chlorurus</u>)	Sagebrush/ Grassland	M ⁴ grant Summer	Uncommon Uncommon	
Rufous-sided Towhee (<u>Pipilo</u> <u>erythrophthalmus</u>)	Sitewide	Migrant Summer	Uncommon Uncommon	
Chipping Sparrow (Spizella passerina)	Riparian	Migrant	Rare	
Brewer's Sparrow (Spizella breweri)	Sitewide	Migrant Summer	Common Common	•
Vesper Sparrow (<u>Pooecetes gramineus</u>)	Agricultural Riparian	Migrant Summer	Uncommon Uncommon	•
Lark sparrow (Chondestes grammacus)	Sitewide	Migrant Summer	Rare Uncommon	

Species	Distribution	Seasonal Occurrence	Abundance	Remark s
Black-throated Sparrow (Amphispiza bilineata)	Sagebrush/ Grassland	Migrant Summer	Rare Rare	
Sage Sparrow (<u>Amphispiza belli</u>)	Sagebrush/ Grassland	Migrant Summer	Common Common	
Lark Bunting (Calamospiza melanocorys)	Sagebrush/ Grassland	Migrant Summer	Rare Rare	
Savannah Sparrow (<u>Passerculus</u> <u>sandwichensis</u>)	Agricultural Riparian	Migrant Summer	Uncommon Uncommon	
Song Sparrow (<u>Melospiza melodia</u>)	Riparian	Migrant Summer	Uncommon ƙare	
White-crowned Sparrow (Zonotrichia leucophrys)	Sitewide	Migrant	Local	
Dark-eyed Junco (Junco hyemalis)	Agricultural Riparian	Migrant	Uncommon	
Snow Bunting (Plectrophenax nivalis)	Sitewide	Migrant Winter	Raire Rure	Often observed with horned lark
Subfamily Icterinae				
Red-winged Blackbird (Agelatus phoeniceus)	Sitewide	Migrant Summer	Uncommon Uncommon	
Western Meadowlark (<u>Sturnella neglecta</u>)	Sitewide	Migrant Summer Winter	Common Common Uncommon	
Yellow-headed Blacibird (Xanthocephalus)	Aquatic Riparian	Migrant Summer	Uncommon Rare	
Brewer's Blackbird (Euphagus cyanocephalus)	Sitewide	Migrant Summer Winter	Common Common Rare	
Brown-headed Cowbind (Molotinus ater)	Agricultural	Migrant Summer	Uncommon Uncommon	
Northern Oriole (Ictarus galbula)	Riparian	Migrant Summer	Uncommon Uncommon	

Species	Distribution	Seasonal Occurrence	Abundance	Remarks
Family Fringillidae	-			
Subfamily Carduelinae				
Rosy Finch (<u>Leucosticte</u> arctoa)	Sagebrush/ Grassland	Migrant Kinter	Rare Rare	
House finch (Carpodacus mexicanus)	Agricultural Facilities Riparian	Migrant Summer	Uncommon Uncommon	
Pine Siskin (<u>Carduelis</u> pinus)	Agricultural Facilities Riparian	Migrant Summer	Uncommon Rare	
American Goldfinch (Carduelis tristis)	Agricultural Riparian	Migrant	Rare	
Evening Grosbeak (<u>Coccothraustes vespertinus</u>)	Agricultural Riparian	Migrant Summer	Uncommon Rare	
Family Passeridae				
House Sparrow (<u>Passer domesticus</u>)	Agricultural Riparian	Migrar. Summer Winter	Abundant Common Uncommon	
SSIBLE OCCURRENCE				
der C1CONIIFORMES				
Family Ardeidae				
Snowy Egret (Egretta thula)	Aquatic			
rder GRUIFORMES				
Family Rallidae				
Subfamily Rallinae				
Virginia Rail (<u>Rallus limicola</u>)	Aquatic			

TABLE 3. (continued)

Species	Distribution	Seasonal Occurrence	Abundance	Remarks
3pec les	D13#1100C10#			- California
Family Gruidae				
Subfamily Gruinae				
Sandhill Crane (Grus canadensis)	Aquatic Sagebrush/ Grassland		•	
Order CHARADRIIFORMES				
Family Recurvirostridae				
Black-necked Stilt (<u>Himantopus mexicanus</u>)	Aquatic			
Order STRIGIFORMES				
Family Strigidae				
Western Screech-owl (Otus kennicottii)	Riparian			
Northern Pygmy Owl (Glaucidium gnoma)	Riparian			
Order APODIFORMES				
Family Trochilidae				
Black-chinned Hummingbird (Archilochus alexandri)	Agricultural Riparian			
Calliope Hummingbird (Stellula calliope)	Agricultural Riparian			
Broad-tailed Hummingbird (Selasphorus platycercus)	Agricultural Riparian			•
Order PICIFORMES				
Family Picidae				
Subfamily Picinae				
Hairy Woodpecker (Picoides villosus)	Agricuitural Riparian			

Spec les	Distribution	Seasonal Occurrence	Abundance	Remarks
Order PASSERIFORMES				
Family Tyrranidae			•	
Subfamily fluvicolinae				
Willow Flycatcher (Empidonax traillii)	Riparian			
Dusky Flycatcher (Empidonax oberholseri)	Riparian			
Gray Flycatcher (Empidonax wrightii)	Junipers Sagebrush/ Grassland			
Family Paridae				
Black-capped Chickadee (<u>Parus atricapillus</u>)	Riparian Juniper			
Mountain Chickadee (<u>Parus gambeli</u>)	Riparian Juniper			
Family Troglodytidae				
Marsh Wren (<u>Cistothurus palustris</u>)	Aquatic			
Family Emberizidae				
Subfamily Parulinae				
Orange-crowned Warbler (<u>Vermivora celata</u>)	Riparian			
MacGillivray's Warbler (<u>Oporonis tolmiei</u>)	Riparian			
Subfamily Emberzinae				
Lapland Longspur (Calcarius lapponicus)	Sagebrush/ Grassland			

TABLE 4. Distribution, seasonal occurrence, and abundance of mammals on the INEL.

Species	Distribution	Seasonal Occurrence	Abundance	Remarks
Order INSECTIVORA				
Family Soricidae				
Merriam Shrew (<u>Sorex merriami</u>)	Sitewide	Resident	Uncommon	
Order CHIROPTERA				•
Family Vespertilionidae				
California Myotis (<u>Myotis californicus</u>)	Sitewide	Unknown	Unknown	
Little Brown Myotis (<u>Myotis lucifugus</u>)	Sitewide	Unknown	Unknown	
Townsend's Big-eared Bat (Plecotus townsendii)	Sitewide	Unknown	Unknown	
Order LAGOMORPHA				
Family Leporidae				
White-tailed Jack dabbit (Lepus townsendii)	Sitewide	Resident	Uncommon	
Black-tailed Jack Rabbit (Lepus californicus)	Sitewide	Resident	Abundant	Cyclic population
Mountain Cottontail (Sylvilagus nuttallii)	Sitewide	Resident	Abundant	
Pygmy Rabbit (Sylvilagus idahoensis) ¹	Sagebrush/ Grassland	Resident	Abundant	
Order RODENTIA				
Family Sciuridae				
Yellow-bellied Marmot (Marmota flaviventris)	Sitewide	Resident	Uncommon	Rocky areas
Townsend's Ground Squirrel (Spermophilus townsendii)	Sitewide	Resident	Common	Estivates - likely to be observed only in April-June

Species	Distribution	Seasonal Occurrence	Abundance	Remarks
Least Chipmunk (<u>Eutamias minimus</u>)	Sitewide	Resident	Common	
Family Geomytdae				
Northern Pocket Gopher (Thomomys talpoides)	Sitewide	Resident	Uncommon	
Family Heteromyidae				
Great Basin Pocket Mouse (<u>Perognathus parvus</u>)	Sitewide	Resident	Common	
Ord's Kangaroo Rat (Dipodomys ordii)	Sitewide	Resident	Common	
Family Castoridae				
Beaver (<u>Castor canadensis</u>)	Aquatic	Summer Winter	Uncommon Uncommon	
Family Cricetidae				
Western Harvest Mouse (<u>Reithrodontomys megalotis</u>)	Sitewide	Resident	Comnon	
Deer Mouse (<u>Peromyscus maniculatus</u>)	Sitewide	Resident	Abundant	
Northern Grasshopper Mouse (Onychomys leucogaster)	Sitewide	Resident	Uncommon	
Bushy-tailed Woodrat (<u>Neotoma cinerea</u>)	Sitewide	Resident	Common	Basalt outcroppings
Meadow Vole (<u>Microtus pennsylvanicus</u>)	Sitewide	Resident	Uncommon	Cyclic
Montane Vole (Microtus montanus)	Sitewide	Resident	Common	Cyclic
Sagebrush Vole (Lagurus curtatus)	Sitewide	Resident	Uncommon	
Muskrat (<u>Ondatra zibethicus</u>)	Aquatic	Summer Winter	Uncommon Uncommon	

TABLE 4. (continued)

Species	Distribution	Seasonal Occurrence	Abundance	Remarks
Family Muridae				
Norway Rat (<u>Rattus norvegicus</u>)	Agricultural	Resident	Uncommon	
House Mouse (<u>Mus musculus</u>)	Agricultural Facilities	Resident	Uncommon	
Family Erythizontidae				
Porcupine (Erethizon dorsatum)	Riparian Juniper	Summer Winter	Uncommon Uncommon	
Order CARNIYORA				
Family Canidae				
Coyote (<u>Canis latrans</u>)	Sitewide	Resident	Common	
Family Mustelidae				
Long-tailed Weasel (<u>Mustela frenata</u>)	Sitewide	Resident	Common	
Badger (<u>Taxidea taxus</u>)	Sitewide	Resident	Common	
Spotted Skunk (<u>Spilogale gracilis</u>)	Sitewide	Resident	Uncommon	Usually near basalt outcroppings
Family Felidae				
Mountain Lion (Felis concolor)	Sitewide	Transient ²	Rare	
Bobcat (<u>Lynx rufus</u>) ³	Sitewide	Resident	Uncommon	
Order ARTIODACTYLA				
Family Cervidae				
Elk (Cervus elaphus)	Sitewide	Transient ²	Rare	

Species	Distribution	Seasonal Occurrence	Abundance	Remarks
Mule Decr (<u>Dama hemionus</u>) ⁴	Strewide	Resident	Uncommon	
Moose (Alces alces)	Sitewide	Transient ²	Rare	
Family Antilocopridae				
Pronghorn (<u>Antilocapra</u> <u>americana</u>)	Sitewid e	Resident	Abundant	
Family Bovidae				
Mountain Sheep (<u>Ovis canadensis</u>)	Sagebrush/ Grassland	Unknown	Accidental	Only reported from northern portion of INEL
POSSIBLE OCCURRENCE				
Order CHIROPTERA				
Family Vespertilionidae				
Small-footed Myotis (Myotis subulatus)	Sitewide			
Yuma Myotis (<u>Myotis yumanensis</u>)	Sitewide			
Long-legged Myotis (Myotis volans)	Sitewide			
Fringed Myotis (Myotis thysanodes)	Sitewide			
Long-eared Myotis (Myotis evotis)	Sitewide			
Silver-haired Bat (Lasionycteris noctivagans)	Sitewide			
Western Pipistrel (<u>Pipistrellus hesperus</u>)	Sitewide			
Big Brown Bat (<u>Eptesicus fuscus</u>)	Sitewide			•

Species	Distribution	Seasonal Occurrence	Abundance	Remarks
Hoary Bat (Nycteris cinerea)	Sitewide			
Pallid Bat (Antrozous pallidus)	Sitewide			
Order CARNIVORA				
Family Procyonidae				
Recoon (<u>Procyon lotor</u>)	Agricultural Riparian			
Family Mustelidae				
Short-tailed Neasel (Ermine) (<u>Mustela erminea</u>)	Agricultural Riparian			
Striped Skunk (<u>Mephitis mephitis</u>)	Agricultural Riparian			
Family Canidae				
Red Fox (<u>Yulpes vulpes</u>)	Agricultural Riparian			

¹ Green and Flinders (1980) list this species as Brachylagus idahoensis.

² Occurs on the INEL for a relatively short time, usually during seasonal migration or dispersal.

³ Jones et al. (1979) list this species as Felis rufus.

⁴ Jones et al. (1979) list this species as Odocoileus hemionus.

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